

Appl. No. 10/528,961
Reply to Office Action of November 29, 2007

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-28 (Cancelled)

29. (Currently Amended) A method for manufacturing an electrical circuit comprising a step of forming at least a part of the electrical circuit by impregnating a ~~π -conjugated~~ conductive polymer exhibiting p-type conduction or n-type conduction in a receptive layer.

30. (Original) The method for manufacturing the part of the electrical circuit of claim 29, comprising the steps of:
impregnating a solution or a dispersed liquid containing the conductive polymer in the receptive layer; and
forming the part of the electrical circuit by evaporating a solvent of a solution containing the conductive polymer or a dispersant of a dispersed liquid containing the

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conductive polymer.

31. (Original) The method for manufacturing the electrical circuit of claim 30, wherein the solvent of the solution containing the conductive polymer or the dispersant of the dispersed liquid containing the conductive polymer contains 30 % or more of water.

32. (Original) The method for manufacturing the electrical circuit of claim 30, wherein the solvent of the solution containing the conductive polymer or the dispersant of the dispersed liquid containing the conductive polymer contains 5 to 70 % by weight of a water soluble organic solvent.

33. (Original) The method for manufacturing the electrical circuit of claim 32, wherein the solvent of the solution containing the conductive polymer or the dispersant of the dispersed liquid containing the conductive polymer contains 10 to 30 % by weight of a water soluble organic solvent.

34. (Original) The method for manufacturing the electrical circuit of claim 30, wherein the solution or the dispersed

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liquid containing the conductive polymer has 0.001 to 1 % by weight of a surfactant.

35. (Previously presented) The method for manufacturing the electrical circuit of claim 34, wherein the surfactant is a non-ionic surfactant.

36. (Original) The method for manufacturing the electrical circuit of claim 29, wherein the part of the electrical circuit is formed by ejecting the conductive polymer onto the receptive layer by a ink-jet printing method so as to impregnate the ejected conductive polymer in the receptive layer.

37. (Original) The method for manufacturing the electrical circuit of claim 30, wherein the solution or the dispersed liquid containing the conductive polymer is impregnated in the receptive layer by ejecting the solution or the dispersed liquid containing the conductive polymer onto the receptive layer by a ink-jet printing method.

38. (Original) The method for manufacturing the electrical

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circuit of claim 36, wherein an amount of the conductive polymer impregnated in the receptive layer is controlled by controlling an amount of the ejected conductive polymer per unit area.

39. (Original) The method for manufacturing the electrical circuit of claim 37, wherein an amount of the conductive polymer impregnated in the receptive layer is controlled by controlling an amount of the ejected solution or the dispersed liquid containing the conductive polymer per unit area.

40. (Previously presented) The method for manufacturing the electrical circuit of claim 29,

wherein:

the conductive polymer is an oligomer having a repeat number of 4 to 19 or a polymer having a repeat number of 20 or more; and

the conductive polymer has a repeat unit of thiophene, vinylene, thienylene vinylene, phenylene vinylene, p-phenylene or a substituent compound thereof.

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41. (Original) The method for manufacturing the electrical circuit of claim 40, wherein the conductive polymer is an oligomer or a polymer having thiophene or substituted thiophene as a repeat unit.

42. (Original) The method for manufacturing the electrical circuit of claim 40, wherein the oligomer or the polymer contains a dopant.

43. (Previously presented) The method for manufacturing the electrical circuit of claim 29, wherein an electrical conductivity of the conductive polymer is 0.01 S/cm or more.

44. (Original) The method for manufacturing the electrical circuit of claim 43, wherein the electrical conductivity of the conductive polymer is 1 S/cm or more.

45. (Previously presented) The method for manufacturing the electrical circuit of claim 29, wherein the receptive layer is porous.

46. (Original) The method for manufacturing the electrical

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circuit of claim 45, wherein the receptive layer contains inorganic particles.

47. (Original) The method for manufacturing the electrical circuit of claim 46, wherein the inorganic particles are silica particles prepared by a vapor deposition method.

48. (Original) The method for manufacturing the electrical circuit of claim 46, wherein an average particle diameter of the inorganic particles is 0.003 to 0.2 μm .

49. (Original) The method for manufacturing the electrical circuit of claim 48, wherein the average particle diameter of the inorganic particles is 0.005 to 0.1 μm .

50. (Original) The method for manufacturing the electrical circuit of claim 46, wherein:

the receptive layer further contains a hydrophilic binder; and a weight ratio of the inorganic particles to the hydrophilic binder is between 2 : 1 and 20 : 1.

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51. (Previously presented) The method for manufacturing the electrical circuit of claim 29, wherein the substrate is a polymer.

52-74 (Cancelled)